



# Electronics Technician Supervisor (ETC)

Only one answer sheet is included in the NRTC. Reproduce the required number of sheets you need or get answer sheets from your ESO or designated officer.

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# ELECTRONICS TECHNICIAN SUPERVISOR (ETC)

## NAVEDTRA 82410

Prepared by the Naval Education and Training Program Management  
Support Activity, Pensacola, Florida

Congratulations! By enrolling in this course, you have demonstrated a desire to improve yourself and the Navy. Remember, however, this self-study course is only one part of the total Navy training program. Practical experience, schools, selected reading, and your desire to succeed are also necessary to successfully round out a fully meaningful training program. You have taken an important step in self-improvement. Keep up the good work.

### HOW TO COMPLETE THIS COURSE SUCCESSFULLY

ERRATA: If an errata comes with this course, make all indicated changes or corrections before you start any assignment. Do not change or correct the Training Manual (TRAMAN) or assignments in any other way.

TEXTBOOK ASSIGNMENTS: The TRAMAN for this course is *Electronics Technician Supervisor*, NAVEDTRA 12410. The TRAMAN pages that you are to study are listed at the beginning of each assignment. Study these pages carefully before attempting to answer the questions in the course. Pay close attention to tables and illustrations because they contain information that will help you understand the text. Read the learning objectives provided at the beginning of each chapter or topic in the text and/or preceding each set of questions in the course. Learning objectives state what you should be able to do after studying the material. Answering the questions correctly helps you accomplish the objectives.

BLACK DOT INFORMATION: Black dots (•) may be used in the text and correspondence course to emphasize important or supplemental information and to highlight instructions for answering certain questions. Read these black dot entries carefully; they will help you answer the questions and understand the material.

SELECTING YOUR ANSWERS: After studying the TRAMAN, you should be ready to answer the questions in the assignment. Read each

question carefully, then select the BEST answer. Be sure to select your answer from the subject matter in the TRAMAN. You may refer freely to the TRAMAN and seek advice and information from others on problems that may arise in the course. However, the answers must be the result of your own work and decisions. You are prohibited from referring to or copying the answers of others and from giving answers to anyone else taking the same course. Failure to follow these rules can result in suspension from the course and disciplinary action.

SUBMITTING COMPLETED ANSWER SHEETS: Complete all assignments as quickly as possible to derive maximum benefit from the course. As a minimum, you must submit at least one assignment per month. This is a requirement established by the Chief of Naval Education and Training. Failure to meet this requirement could result in disenrollment from the course.

TYPES OF ANSWER SHEETS: If you are a U.S. Navy enlisted member on active duty or a drilling U.S. Naval Reserve enlisted member, you should use the answer sheet attached at the end of this course and follow the instructions in section A below. If you are an enlisted U.S. Naval Reserve member who is not attached to a drilling unit or if you are an officer, a civilian, or a member of the U.S. Army, Air Force, Marine Corps, or Coast Guard, you should use the Automatic Data Processing (ADP) answer sheets included in the course package and follow the instructions in section B.

#### A. Manually Scored Answer Sheets

If you are a U.S. Navy enlisted member on active duty or attached to a U.S. Naval Reserve drilling unit, your course will be administered by your local command. You must use the answer sheet designed for manual scoring, NETPMSA Form 1430/5, Stock Ordering Number 0502-LP-216-0100. You may get a supply of the forms from your ESO or you may reproduce the one in the back of this course booklet. DO NOT USE THIS FORM FOR COURSES ADMINISTERED BY NETPMSA.

Recording Information on the Manually Scored Answer Sheets: As you complete each assignment, submit the completed answer sheet to your local educational services officer (ESO) for grading. You may submit more than one answer sheet at a time. Remember, you must submit at least one assignment each month.

Grading: Your ESO will grade each answer sheet and notify you of any incorrect answers. The passing score for each assignment is 3.2. If you receive less than 3.2 on any assignment, the ESO will list the questions you answered incorrectly and give you a pink answer sheet marked RESUBMIT. You must redo the assignment and complete the RESUBMIT answer sheet. The maximum score you can receive for a resubmitted assignment is 3.2.

Course Completion: After you have submitted all the answer sheets and have earned at least 3.2 on each assignment, your command should give you credit for this course by making the appropriate entry on Page 4 of your service record.

Student Questions: If you have questions concerning the administration of this course, consult your local ESO.

#### B. ADP Answer Sheets

If you are an enlisted U.S. Naval Reserve member who is not attached to a drilling reserve unit or if you are an officer, a civilian, or a member of the U.S. Army, Air Force, Marine Corps, or Coast Guard, you should use the ADP answer sheets provided in your course package. You should use one blank original ADP answer sheet for each assignment. Use only the original ADP

answer sheet provided in your course package, NETPMSA will not accept reproductions.

Recording Information on the ADP Answer Sheets: Carefully follow the MARKING INSTRUCTIONS on each answer sheet. Be sure that blocks 1, 2, and 3 are filled in correctly. This information identifies you (the student), the course, and the assignment; it must be correct for NETPMSA to process your course and give you credit for your work.

Because your ADP answer sheets will not be returned to you, be sure to mark your answers in the course booklet as you are working the course. Whenever you complete an assignment, transfer your answers from the course booklet to the ADP answer sheet.

Mailing the Completed ADP Answer Sheets: Upon completing an assignment, mail the completed answer sheet to:

Commanding Officer  
Naval Education and Training  
Program Management Support  
Activity  
Pensacola, FL 32559-5000

Use envelopes to mail your answer sheets. You must provide your own envelopes or request them from your local educational services officer (ESO). You may enclose more than one answer sheet in a single envelope. Remember, regardless of how many answer sheets you submit at a time, NETPMSA should receive at least one assignment a month.

NOTE: DO NOT USE THE COURSE COMMENTS PAGE AS AN ENVELOPE FOR RETURNING ANSWER SHEETS OR OTHER COURSE MATERIALS.

Grading: NETPMSA will grade the answer sheets and notify you by letter concerning your grade for each assignment, your incorrect answers, and your final grade. The passing score for each assignment is 3.2. If you receive less than 3.2 on any assignment, you must rework the assignment. NETPMSA will enclose a new ADP answer sheet in the letter notifying you of the questions you answered incorrectly. You will be required to redo

the assignment and resubmit the new answer sheet. The maximum score you can receive for a resubmitted assignment is 3.2.

Course Completion: When you complete the last assignment, fill out the Course Completion form in the back of the course and enclose it with your last answer sheet. NETPMSA will issue you a letter certifying that you satisfactorily completed the course. You should make sure that credit for the course is recorded in your service record. YOU MAY RETAIN THE TEXT.

NOTE: YOUR OFFICIAL COURSE COMPLETION DATE WILL BE THE DATE YOUR LAST ASSIGNMENT IS PROCESSED THROUGH NETPMSA'S ADP SYSTEM--NOT THE DATE YOU DEPOSIT THE LAST ASSIGNMENT IN THE MAIL. This is especially important if you are taking the course for Naval Reserve retirement credit. You must mail your answer sheets at least 60 days before your anniversary date. This will provide you with enough time for delays in the mail or reworking failed assignments. DO NOT MAIL YOUR ASSIGNMENTS TO THE NAVAL RESERVE PERSONNEL COMMAND (NRPC).

Student Questions: If you have questions concerning this course, notify NETPMSA by mail (use the address on page ii) or by telephone: DSN 922-1366 or commercial (904) 452-1366.

#### NAVAL RESERVE RETIREMENT CREDIT

If you are a member of the Naval Reserve, you will receive retirement points if you are authorized to receive them under current directives governing retirement of Naval Reserve personnel. For the purpose of Naval Reserve retirement, this edition of the course is evaluated at 8 points. These

points will be credited to you upon your satisfactory completion of the entire course.

NOTE: YOUR OFFICIAL COURSE COMPLETION DATE WILL BE THE DATE YOUR LAST ASSIGNMENT IS PROCESSED THROUGH NETPMSA'S ADP SYSTEM--NOT THE DATE YOU DEPOSIT THE LAST ASSIGNMENT IN THE MAIL. Refer to the Course Completion paragraph under section B. ADP Answer Sheets.

#### COURSE OBJECTIVES

Describe the basic electronics division organization.

Identify the primary reports, forms, publications, and procedures used in administering the electronics division.

Describe the primary types of training and the procedures used to provide such training to members of the electronics division.

Discuss the quality assurance program that covers electronic equipment, the primary components of the program, reports associated with the program, and the responsibilities of the personnel concerned with the program.

Discuss how electronic test equipment is managed at the division level, and the administrative requirements associated with such management.

Describe the sources and types of electromagnetic interference (EMI), their effect on communications, and how they can be controlled or prevented.

Naval courses may include several types of questions—multiple-choice, true-false, matching, etc. The questions are not grouped by type but by subject matter. They are presented in the same general sequence as the textbook material upon which they are based. This presentation is designed to preserve continuity of thought, permitting step-by-step development of ideas. Not all courses use all of the types of questions available. The student can readily identify the type of each question, and the action required, by inspection of the samples given below.

### MULTIPLE-CHOICE QUESTIONS

Each question contains several alternatives, one of which provides the best answer to the question. Select the best alternative, and blacken the appropriate box on the answer sheet.

#### SAMPLE

- s-1. Who was the first person appointed Secretary of Defense under the National Security Act of 1947?
1. George Marshall
  2. James Forrestal
  3. Chester Nimitz
  4. William Halsey

Indicate in this way on the answer sheet:

	1	2	3	4	
	T	F			
s-1	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	---

### TRUE-FALSE QUESTIONS

Mark each statement true or false as indicated below. If any part of the statement is false the statement is to be considered false. Make the decision, and blacken the appropriate box on the answer sheet.

#### SAMPLE

- s-2. All naval officers are authorized to correspond officially with any systems command of the Department of the Navy without their respective commanding officer's endorsement.
1. True
  2. False

Indicate in this way on the answer sheet:

	1	2	3	4	
	T	F			
s-2	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	---

### MATCHING QUESTIONS

Each set of questions consists of two columns, each listing words, phrases or sentences. The task is to select the item in column B which is the best match for the item in column A that is being considered. Items in column B maybe used once, more than once, or not at all. Specific instructions are given with each set of questions. Select the numbers identifying the answers and blacken the appropriate boxes on the answer sheet.

#### SAMPLE

In questions s-3 through s-6, match the name of the shipboard officer in column A by selecting from column B the name of the department in which the officer functions. Some responses maybe used once, more than once, or not at all.

#### A. OFFICER

#### B. DEPARTMENT

Indicate in this way on the answer sheet:

- |                               |                           |
|-------------------------------|---------------------------|
| s-3. Damage Control Assistant | 1. Operations Department  |
| s-4. CIC Officer              | 2. Engineering Department |
| s-5. Disbursing Officer       | 3. Supply Department      |
| s-6. Communications Officer   |                           |

	1	2	3	4	
	T	F			
s-3	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	---
s-4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	---
s-5	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	---
s-6	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	---

## ASSIGNMENT 1

Textbook Assignment: "Organization and Administration," chapter 2, pages 2-1 through 2-16.

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- 1-1. The establishment of an electronics repair organizational chart is primarily the responsibility of which of the following people?
1. The department head
  2. The electronics material officer
  3. The leading electronics technician
  4. The commanding officer
- 1-2. Which of the following instructions prescribes the basic administration and functional organization in U.S. ships?
1. The ship's instruction
  2. The type commander or higher authority instructions
  3. Standard Organization and Regulations of the U.S. Navy
  4. U.S. Navy Regulations
- 1-3. The intent of the electronics division organizational manual regarding proper management of maintenance efforts and resources is described by which of the following statements?
1. To set forth the organization
  2. To set forth the procedures
  3. To set forth the policies
  4. All of the above
- 1-4. To administer your division effectively and efficiently, you must have which of the following management "tools"?
1. A clear organizational structure
  2. Definite organizational policies and procedures
  3. Other controls necessary to accomplish the full mission
  4. All of the above
- 1-5. As a senior ET, you will need to assist in updating and revising the division organizational manual when needed.
1. True
  2. False
- 1-6. Which of the following information sources is/are part of the electronics division manual?
1. Divisional Instructions and Bills
  2. Division Organization Manual
  3. Casualty Control Manual
  4. All of the above
- 1-7. The Navy Directives Issuance System Consolidated Subject Index (NAVPUBNOTE 5215) contains lists of which of the following items?
1. Federal stock numbers
  2. Notices and instructions
  3. Navy technical manuals
  4. Navy enlisted classification codes
- 1-8. In administering your electronics repair organization, you will likely use which of the following sources?
1. EIBs
  2. EIMBs
  3. The Navy Directives Issuance System Consolidated Subject Index
  4. All of the above

- 1-9. The assignment of personnel to stations on the division watch, quarter, and station bills should be practical and functional, as assessed by whom?
1. The commanding officer
  2. The departmental officer
  3. The electronics material officer
  4. Your subordinates
- 1-10. Specific instructions for general quarters should be outlined in the electronics division organization manual and the electronics casualty control manual.
1. True
  2. False
- 1-11. Your ship is in port and you are the duty ET. ET2 Norwood rates liberty and is preparing to depart the ship. An equipment casualty occurs that requires additional help in repairing. As duty electronics technician. you can call upon ET2 Norwood because he is considered to be in a duty status.
1. True
  2. False
- 1-12. During sea detail, the electronics workshop or office should be manned by a senior ET for receipt and coordination of trouble calls.
1. True
  2. False
- 1-13. As a senior ET, your responsibilities will include which of the following important supervisory and administrative decisions or duties?
1. Personnel assignments
  2. Planning workloads
  3. Prompt and proper completion of all paper work
  4. All of the above

- 1-14. What person is ultimately responsible for division reports and records?
1. The work group supervisor
  2. The leading electronics technician
  3. The assistant electronics material officer
  4. The electronics material officer

- |   |
|---|
| <p>A. Casualty Report (CASREP)</p> <p>B. Eight O'clock Report</p> <p>C. Trouble Report</p> <p>D. Getting Underway Report</p> <p>E. Survey Report</p> <p>F. Report of Discrepancy (ROD)</p> <p>G. Anticipated Not Operationally Ready-Supply</p> <p>H. Quality Deficiency Report (QDR)</p> |
|---|

Figure 1A.--Reports.

IN ANSWERING QUESTIONS 1-15 THROUGH 1-26, SELECT THE REPORT FROM FIGURE 1A THAT IS DESCRIBED IN THE QUESTION.

- 1-15. Supports the CNO and fleet commanders in management of assigned forces. providing an accurate operational status for each unit.
1. A
  2. B
  3. C
  4. E
- 1-16. Daily equipment status report given to the commanding officer.
1. A
  2. B
  3. E
  4. G



- 1-17. When used in conjunction with a log, assists in tracking equipment problems and 3-M documentation.
1. A
  2. B
  3. C
  4. D
- 1-18. Equipment status report turned in before getting underway.
1. E
  2. B
  3. C
  4. D
- 1-19. Indicates electronic equipment problems, or failures noted by the operator or technician.
1. C
  2. E
  3. F
  4. D
- 1-20. A report similar to an Eight O'clock Report.
1. A
  2. C
  3. D
  4. G
- 1-21. Used to report defective material that is not suitable for its intended use because of design, material makeup, or procurement.
1. A
  2. E
  3. F
  4. H
- 1-22. A requisition used when a casualty is anticipated because of the lack of material.
1. C
  2. F
  3. E
  4. G
- 1-23. Used to report shipping or packaging discrepancies of materials that are attributable to the shipper.
1. F
  2. G
  3. E
  4. A
- 1-24. Used to report unacceptable substitutes and wrong items.
1. E
  2. G
  3. C
  4. F
- 1-25. Submitted to the Fleet Material Support officer (FMSO).
1. A
  2. H
  3. F
  4. G
- 1-26. Used when naval property must be condemned because of damage, obsolescence, or deterioration, or acknowledged as nonexistent because of loss, theft, or total destruction.
1. E
  2. F
  3. G
  4. C
- 1-27. Which of the following statements concerning routing procedures is correct?
1. Only OPNAV or NAVSEA instructions require a routing slip
  2. Routing slips need not be retained after correspondence has been routed
  3. A routing slip should be attached to all correspondence that enters the work center
  4. Correspondence of a lasting nature should be retained until all personnel have read it

1-28. A correspondence tickler file provides a means of taking which of the following actions?

1. Determining which documents should be retained
2. Routing correspondence
3. Determining which shop personnel have read the correspondence
4. Keeping track of the action taken on all correspondence entering the work center

1-33. When going through your files, you find information (dated 4 years prior) on equipment no longer on board. What should you do with the information in the files?

1. Retain it for 5 years from the filed date
2. Retain it for 7 years from the filed date
3. Place it in a "Hold" file for 3 years
4. Purge it from the files

---

IN ANSWERING QUESTIONS 1-29 THROUGH 1-32, SELECT FROM COLUMN B THE TYPE OF FILE DEFINED IN COLUMN A. YOU MAY USE THE RESPONSES IN COLUMN B MORE THAN ONCE.

A	<u>DEFINITIONS</u>	B. <u>FILE TYPES</u>
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1-29.	Used for correspondence file cards when an action or report cannot be completed	1. Active file 2. Suspense file 3. Completed file
-------	---	---

1-30. Contains tab cards for each day of the month plus a card with the month on it

1-31. Contains tab cards with titles that describe the reason for deferral of an action

1-32. Contains routing slips attached to correspondence tickler file cards

1-34. Which of the following methods is NOT used to simplify correspondence control?

1. Routing procedures
2. Correspondence tickler file
3. Maintenance action

1-35. A correspondence tickler file is made up of which of the following components?

1. An active file and a suspense file only
2. An active file and a completed action file only
3. A suspense file and a completed action file only
4. An active file, a suspense file, and a completed action file

1-36. Which of the following sources contain(s) basic guidance for reference publications?

1. The TYCOM administration and material inspection list
2. The Electronics Installation and Maintenance Book-General
3. The Electronics Installation and Maintenance Book-General Maintenance
4. All of the above

- 1-37. Which of the following "rules" should you follow when you order publications?
1. Order 10 percent more than what is really needed
  2. Order only the number of copies really needed
  3. Order only one copy at a time
  4. Order one copy for each work center supervisor

- 1-38. Your technical library should have at least how many copies of each applicable technical manual?

1. One up-to-date copy
2. Two copies
3. Two copies plus one up-to-date copy
4. Three copies

- 1-39. Which of the following statements best describes the use of the OPNRV 5070/11 record and inventory card?

1. Used to inventory publications on hand in the technical library only
2. Used to inventory publications issued from the technical library only
3. Used to inventory publications having changes only
4. Used to inventory publications and assist in distributing changes to publications having changes

- 1-40. Which of the following documents identifies manpower requirements, in terms of quantity and quality, for performing mission requirements?

1. Personnel Manpower Document
2. Departmental Manpower Document
3. Ship Manpower (Manning) Document
4. Required Operational Capabilities

- A. Naval Air Systems Command Technical Manual Program
  - B. Navy Stock List of Publications and Forms (NAVSUP 2002)
  - C. Enhanced Ships Technical Publications System (E-STEPS)
  - D. Publication Applicability List (PAL)
  - E. Guide for User Maintenance of NAVSEA Technical Manuals

Figure 1B.--Publications.

IN ANSWERING QUESTIONS 1-41 THROUGH 1-43, SELECT FROM FIGURE 1B THE PUBLICATION THAT IS BEST DESCRIBED IN THE QUESTION.

- 1-41. Master set of microfiche that contain information concerning technical documentation supporting general documents: ships selected records; ships electronics; HM&E and ordnance systems; and equipments under cognizance of NAVSEA and SPAWAR.

1. A
2. B
3. C
4. D

- 1-42. The Publication Applicability List (PAL) is a product of this system.

1. A
2. B
3. C
4. E

- 1-43. Lists technical manuals for systems and equipments reported to be installed on your ship.

1. B
2. C
3. D
4. E

- |  |
|--|
| A. Section I<br>B. Section II<br>C. Section III<br>D. Section IV |
|--|

Figure 1C.--Manning Document Sections.

IN ANSWERING QUESTIONS 1-44 THROUGH 1-47. SELECT THE MANNING DOCUMENT SECTION FROM FIGURE 1C THAT IS DESCRIBED IN THE QUESTION.

1-44. Displays the ship manpower requirements by organizational component.

1. A
2. B
3. C
4. D

1-45. Shows watch station requirements for each condition of readiness prescribed in the ROC and POE statements.

1. A
2. B
3. C
4. D

1-46. Consolidates officer requirements into a single section, by organizational component.

1. A
2. B
3. C
4. D

1-47. Shows the number of officer, enlisted, and civilian manpower requirements at the departmental level.

1. A
2. B
3. C
4. D

1-48. What section of the SMD provides a summary of all workloads, by category, that contribute to the requirements in each organizational component?

1. V
2. VI
3. VII
4. XV

1-49. What part of the SMD provides a summary of enlisted manpower by each organizational component, showing the totals for each division and department, and the skill level at the divisional level?

1. Part 02 of section VI
2. Part 02A of section VI
3. Part I of section VII
4. Part II of section VII

1-50. At what intervals are the manpower requirements and classifications specifically reviewed at the activity level?

1. Quarterly
2. Every 6 months
3. Annually
4. Every 2 years

1-51. The manpower requirements and manpower classifications within each activity are reviewed to ensure which of the following conditions?

1. Deletion of unnecessary billets
2. Deletion of positions
3. Proper classification of each authorized billet or position
4. All of the above

1-52. Requests involving an activity's reorganization are planned and submitted based on the proposed number of billets.

1. True
2. False

1-53. Changes to the designator, grade, or number of billets must be justified in terms of changes in activity missions, function, and task.

1. True
2. False

1-54. Submission of a Manpower Authorization Change Request, other than once annually, must be justified on the basis of changes in mission or function beyond the control of the activity.

1. True
2. False

1-55. Valid requirements for billet changes that require movement of personnel must be identified and requested as early as feasible.

1. True
2. False

1-56. Which of the following reports or documents will you see and use most often?

1. Ship Manpower Document
2. Manpower Authorization
3. Manpower Authorization Change Request
4. Enlisted Distribution and Verification Report

1-57. Which of the following is NOT a purpose of the EDVR?

1. Provides a common reference point in any discussion of manning status between the manning or detailing control authorities and the activity
2. Provides a statement of account for verification by the activity
3. Provides a rate or NEC summary of only the current manning status of the activity
4. Provides a permanent historical record in BUPERS of an activity's personnel account for statistical uses and overall Navy manning

1-58. The summary of an activity's authorized NEC billets and the members on board or expected on board who possess those NECs, is contained in what part of the EDVR?

1. Section 4, Total Personnel on Board and Rating NEC Summary
2. Section 5, Personnel Status Summary
3. Section 6, NEC Summary
4. Section 8, NEC Billet/Personnel Inventory

## ASSIGNMENT 2

Textbook Assignment: "Organization and Administration," chapter 2--continued, pages 2-16 through 2-24.

<p>2-1. Which of the following terms refers to the structure of a ship defined in terms of onboard systems and equipment?</p> <ol style="list-style-type: none"> <li>1. Configuration</li> <li>2. Complement</li> <li>3. Logistical make-up</li> <li>4. Weapon system</li> </ol>		<p>IN ANSWERING QUESTIONS 2-5 THROUGH 2-9. SELECT FROM COLUMN B THE CORRECT VALIDATION/AUDIT THAT APPLIES TO THE DESCRIPTION PROVIDED IN COLUMN A. YOU MAY USE THE RESPONSES IN COLUMN B MORE THAN ONCE.</p>	
		<u>A. DESCRIPTIONS</u>	<u>B. VALIDATION/AUDIT</u>
<p>2-2. The Ship Configuration and Logistics Support Information System (SCLSIS) replaced which of the following programs?</p> <ol style="list-style-type: none"> <li>1. COSAL</li> <li>2. METRL</li> <li>3. SECAS</li> <li>4. SEMCIP</li> </ol>	2-5.	Sampling validation to ensure that data in the SCLSI database is correct	1. Baseline validation
	2-6.	Includes follow-on clarification audits	2. Audit
<p>2-3. The weapon systems file/SCLSI database is maintained by the Ship's Parts Control Center (SPCC). The term "weapon systems file" refers to which of the following configuration files?</p> <ol style="list-style-type: none"> <li>1. Parts inventory portion</li> <li>2. Parts level</li> <li>3. Component level</li> <li>4. All of the above</li> </ol>			3. Correction validation
	2-7.	Produces the ship Class Standard Database (CSDB)	4. Installation validation
<p>2-4. How often should TYCOM administrative inspections be expected?</p> <ol style="list-style-type: none"> <li>1. Once each training cycle</li> <li>2. Once each overhaul cycle</li> <li>3. Only upon request by the ship's commanding officer</li> </ol>	2-8.	Compares equipment that <u>is</u> on board with what <u>should</u> be on board	
	2-9.	Verifies data being reported for new configuration item installations	
		2-10.	How often should inspections of electronic equipment and digital data equipment be expected?
			1. Once a quarter
			2. At least once during the ship's overhaul cycle
			3. At least once during the ship's training cycle
			4. Only when the ship's commanding officer feels it is necessary

2-11. When an INSURV inspection is required, (a) who conducts it and (b) what is its purpose?

1. (a) Type commander  
(b) To determine the material readiness of the ship's equipment and systems
2. (a) Board of Inspection and Survey  
(b) To determine the material readiness of the ship's equipment and systems
3. (a) Board of Inspection and Survey  
(b) To determine the administrative readiness of the ship
4. (a) Type commander  
(b) To determine the administrative readiness of the ship

2-12. What is the purpose of a type commander's administrative inspection?

1. To determine the material readiness of departments
2. To determine only if PMS and administrative records are handled in an intelligent and efficient manner
3. To examine administrative methods and procedures at the whole ship category
4. To examine administrative methods and procedures at the ship level and department category

2-13. Which of the following statements is/are correct concerning Material Readiness Inspections?

1. They determine the material readiness of shipboard equipment and systems
2. They are conducted once during each ship's training cycle
3. They are normally conducted concurrently with, or as a part of, the INSURV inspection
4. All of the above

IN ANSWERING QUESTIONS 2-14 THROUGH 2-18, SELECT FROM COLUMN B THE CORRECT SECTION OF MATERIAL READINESS INSPECTION THAT APPLIES TO THE DESCRIPTION PROVIDED IN COLUMN A. YOU MAY USE THE RESPONSES IN COLUMN B MORE THAN ONCE.

	<u>A. DESCRIPTIONS</u>	<u>B. SECTIONS</u>
2-14.	Visually inspecting and determining the condition and adequacy of all. equipment, cabling, repair parts, and tools	1. Performance inspection 2. Physical inspection
2-15.	Includes checks on whether the quantity and rates of personnel on board meet the ship's allowance	3. Maintenance administration inspection
2-16.	Includes system tests conducted on designated systems at a test and calibration facility	
2-17.	Determines if there is an established procedure for submitting OPNAV 4790/2 and 4790/CK forms	
2-18.	Makes basic measurements listed on the MRC for the equipment and systems	
2-19.	Which of the following publications contains installation criteria for shipboard secure electrical information processing systems?	
	1. MIL-SPEC-1680	
	2. MIL-STD-1680	
	3. MIL-SPEC-1860	
	4. MIL-STD-1860	

2-20. What type of inspection is the POT&I?

1. Postoverhaul test and inspection of the ship
2. Postoverhaul test and inspection to find out what work is still remaining from the overhaul
3. Preoverhaul test and inspection of the ship used in developing plans for an upcoming overhaul
4. Preoverhaul test and inspection only to inform NAVSEA of what overhaul work is to be completed during the overhaul

2-21. Which of the following TEMPEST inspections is the most complicated and is usually completed on only one ship of a class?

1. On-site survey
2. Instrumented TEMPEST Survey
3. Instrumented TEMPEST Configuration Control Inspection
4. Visual TEMPEST Configuration Control Inspection

2-22. Which of the following is a purpose of the Postoverhaul Inspection?

1. To furnish the commanding officer of the ship a report on the condition, capabilities, and limitations of the shipboard equipment and systems
2. To furnish the type commander with a report on the condition of the ship
3. To furnish NAVSEA with a report on the condition of the ship
4. To furnish NAVELEX with a report on the condition of the ship

IN ANSWERING QUESTIONS 2-23 THROUGH 2-27, SELECT FROM COLUMN B THE CORRECT AVAILABILITY OR PERIOD THAT APPLIES TO THE DESCRIPTION IN COLUMN A. YOU MAY USE THE RESPONSES IN COLUMN B MORE THAN ONCE.

	<u>A. DESCRIPTIONS</u>	<u>B. AVAILABIL- ITIES</u>
2-23.	Normally assigned for emergency repairs of prime systems problems that impair the ship in fulfilling its mission	1. IMAV (Inter-mediate Level Maintenance Activity Availability)
2-24.	Denotes repairs of problems with noncritical systems or equipment that must be undertaken by a repair facility or yard, but that do not affect the ship's mission	2. RAV (Restricted Availability) 3. TAV (Technical Availability) 4. Upkeep period
2-25.	Availabilities assigned with either afloat repair activities or shore intermediate maintenance activities	
2-26.	A period of time in port during which the facilities of a yard or tender are available for routine maintenance that cannot be done underway.	
2-27.	A period of time during which the ship is rendered incapable of performing its mission.	



- 2-28. Which of the following statements correctly describe(s) voyage repairs?
1. Repairs of an emergency nature that must be made to enable a ship to continue on its mission
  2. Repairs of an emergency nature that can be made without requiring a change in the ship's operating schedule
  3. Repairs that normally cannot be made by ship's force
  4. All the above
- 2-29. Which of the following are the main sources for the definition of work required for shipyard overhaul?
1. Ship's knowledge and the CSMP
  2. Ship's knowledge and the POT&I
  3. The CSMP and the POT&I
  4. Ship's knowledge, the CSMP, and the POT&I

- A. Preoverhaul Test and Inspection (POT&I)
  - B. Conduct of other POT&Is designated by the type commander and concurrent development by the naval shipyard or SUPSHIPS
  - C. Maintenance work definition review scheduled by the type commander
  - D. Type commander screening of CSMP and work identified by POT&I
  - E. CSMP validation

Figure 2A.--Work requirements.

IN ANSWERING QUESTIONS 2-30 AND 2-31, SELECT THE CORRECT RESPONSE FROM FIGURE 2A.

- 2-30. Which of the following is the correct sequence for the development of the Ship Alteration and Repair Package (SARP)?
1. A, B, C, D, E
  2. A, D, E, C, B
  3. D, A, E, B, C
  4. E, A, D, B, C

- 2-31. In what step of the SARP development must the ship place in priority order all work requirements that have been screened, but not yet authorized for industrial accomplishment?
1. B
  2. C
  3. D
  4. E
- 2-32. When the electronics work list is prepared before overhaul, where does most of the information come from?
1. PMS requirements
  2. Division planning list
  3. CSMP
  4. Individual work lists
- 2-33. Which of the following statements is NOT correct concerning the responsibilities of the electronics division during overhaul?
1. Once the overhaul personnel assume the equipment and systems, the electronics division no longer has any responsibility for the applicable equipment and systems
  2. The electronics division maintains responsibility for applicable equipment and systems being repaired continues throughout the overhaul
  3. The electronics division must inspect the work during repairs and upon completion
  4. The electronics division must sign off jobs that are completed, using the QA Manual as a reference

- 2-34. At the completion of an overhaul, what happens to all job orders (except in unusual circumstances) for uncompleted work?
1. They are closed or canceled
  2. They are left open for post overhaul completion
  3. They are closed or canceled except for authorized alterations
  4. They are left open for post overhaul completion; however, alterations have to be completed before the ship leaves the repair yard
- 2-35. Which of the following is the general definition of an alteration?
1. Any change affecting almost anything about the ship
  2. A minor change affecting almost anything about the ship
  3. A major change affecting almost anything about the ship
  4. A change of significant magnitude affecting anything about the ship
- 2-36. Alterations may be in the form of SHIPALTs, BOATALTs, MACHALTs, ORDALTs, or AERs. These alts are considered what kind of improvements?
1. Essential or nonessential
  2. Military or technical
  3. Nontechnical or technical
  4. Technical or safety related
- 2-37. Which of the following alternation improvements, if any, results in a change of a ship's operational or military characteristics, qualities, or features?
1. Technical improvement
  2. Military improvement
  3. Essential improvement
  4. None of the above
- 2-38. Which of the following alternation improvements, if any, results in a change to improve the safety of personnel and equipment and/or provides increased reliability, maintainability, and efficiency of installed equipments?
1. Essential improvement
  2. Military improvement
  3. Technical improvement
  4. None of the above
- 2-39. Which of the following categories of ship alterations are funded and authorized by the CNO?
1. Title "D" and "F"
  2. Title "D" and "K/P"
  3. Title "K" and "D"
  4. Title "K" and "K"
- 2-40. Which of the following categories of ship alterations are authorized and funded by the type commander?
1. Title "D" and "F"
  2. Title "D" and "K/P"
  3. Title "K" and "D"
  4. Title "K" and "F"
- 2-41. Which of the following basic purposes pertain to a field change?
1. Improving performance and reliability
  2. Improving maintenance and operational characteristics
  3. Improving safety
  4. All of the above

IN ANSWERING QUESTIONS 2-42 THROUGH 2-47, SELECT THE TYPE OF FIELD CHANGE LISTED IN COLUMN B THAT IS DESCRIBED BY THE STATEMENT IN EACH QUESTION IN COLUMN A. YOU MAY USE THE RESPONSES IN COLUMN B MORE THAN ONCE.

A. DESCRIPTIONS	B. TYPES OF FIELD CHANGES
2-42. Does not require parts or use of any special tools	1. Type I Field Change
2-43. May require parts; none of which are included with the field change	2. Type II Field Change
2-44. Requires parts; all of which are included in the field change kit	3. Type III Field Change
2-45. Requires parts; some, but not all, of which are included in the field change kit	4. Type IV Field Change
2-46. Provides the publications package changes and materials and special tools required	
2-47. Is usually published in an EIB article and consists only of a publication change	

2-48. Most shipboard electrical shocks are caused in which of the following ways?

1. By unauthorized use of, or unauthorized modifications to equipment and failure to repair equipment that was known to be defective and had previously given a mild shock to users
2. Failure to observe the applicable safety precautions in the use of equipment or in working on or near energized equipment
3. Failure to test and inspect equipment for defects, or failure to remedy all defects found by tests and inspections
4. All of the above

IN ANSWERING QUESTIONS 2-49 THROUGH 2-52, SELECT THE CLASS OF FIELD CHANGE LISTED IN COLUMN B THAT IS DESCRIBED IN COLUMN A. YOU MAY USE THE RESPONSES IN COLUMN B MORE THAN ONCE.

A. DESCRIPTIONS	B. CLASSES OF FIELD CHANGES
2-49. Is approved for forces afloat or station personnel accomplishment; no installation funding is required	1. Class A 2. Class B 3. Class C
2-50. Normally requires industrial assistance for installation and requires the appropriate systems command installation funding	
2-51. Approval of this class of field change for forces afloat accomplishment indicates only that work content is within their technical capability	
2-52. Requires fleet installation funding for accomplishment by naval shipyards, tenders, and so on, when authorized by the type commander	

2-53. Accidents do not occur without a cause; most accidents are the direct result of some deviation from prescribed safe operating procedures.

1. True
2. False

2-54. Training in the observance of safety precautions can help avoid preventable accidents and encourage maintenance of a work environment conducive to accident-free operation.

1. True
2. False

2-55. One of your first duties with respect to safety education is to ensure that all personnel in the electronics division are aware of the dangers and the safety precautions necessary to combat these dangers.

1. True
2. False

2-56. Concerning electrical shock, what is the lowest voltage that is considered dangerous?

1. 12 volts
2. 20 volts
3. 30 volts
4. 100 volts

## ASSIGNMENT 3

textbook Assignment: "Organization and Administration," chapter 2--continued, pages 2-24 through 2-25; "Supervision and Training," chapter 3, pages 3-14 through 3-21; and "Quality Assurance," chapter 6, pages 6--1 through 6-11.

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### QUESTIONS 3-1 THROUGH 3-7 PERTAIN TO CHAPTER 2.

3-1. Fundamentally, current rather than voltage is the criterion of shock intensity. Which of the following dc current levels can cause muscular inhibition?

1. 15-80 mA
2. 21-40 mA
3. 80-160 mA
4. 160-300 mA

3-2. Which of the following levels of ac current are usually fatal?

1. 4-21 mA
2. 21-40 mA
3. 40-100 mA
4. Over 100 mA

3-3. Under unfavorable conditions, the resistance of the human body can decrease to what level?

1. 30 ohms
2. 300 ohms
3. 3,000 ohms
4. 30,000 ohms

3-4. You are in a situation where your body resistance is low, and the path from a point where you touch a radar bias-supply voltage of +30 volts is through your body. Which of the following results can you expect?

1. Only surprise
2. Surprise and reflex action
3. Muscular inhibition
4. Fatality

3-5. Which of the following publications provide(s) safety information, rules, and regulations?

1. Electronic Installation Maintenance Book-General
2. Naval Ship's Technical Manual.- Chapter 400
3. OPNAV 5100.19, Navy Safety Precautions for Forces Afloat
4. All of the above

3-6. Security of classified information should become a natural element of every task and not an additionally imposed burden.

1. True
2. False

3-7. What is the publication number of the Navy Information and Personnel Security Program Regulation?

1. OPNAV 5100.19
2. OPNAV 5510.1
3. OPNAV 4790.4
4. OPNAV 5310.19

### QUESTIONS 3-8 THROUGH 3-50 PERTAIN TO CHAPTER 3.

3-8. Which of the following schools are considered formal off-ship/shop training?

1. Navy Class A and C schools
2. Factory schools
3. MOTU schools
4. All of the above

- 3-9. What type of formal training is usually more expensive to the government but is often the only source of training available?
1. Factory schools
  2. Navy class "A" schools
  3. Navy class "C" schools
  4. MOTU schools
- 3-10. MOTU scheduled classes are normally announced by which of the following means?
1. By formal letter to the commanding officer on a monthly or quarterly basis
  2. By formal letter to the commanding officer annually
  3. By message to all local units on a monthly or quarterly basis, depending on the location of the MOTU
  4. By message to all units on a monthly basis
- 3-11. Which of the following publications lists all formal courses of instruction offered to naval personnel?
1. NAVEDTRA 10500 (CANTRAC)
  2. NAVEDTRA 10052 (Bib. for Advancement Study)
  3. NAVEDTRA 10061 (List of Training Manuals and Correspondence Courses)
- 3-12. The CANTRAC provides which of the following information?
1. Names of instructors
  2. Convening frequency of courses
  3. College point equivalents
  4. Textbooks required
- 3-13. Which of the following is a characteristic of OJT?
1. It is the most time consuming
  2. It requires the greatest amount of advanced planning
  3. It can be used almost any time a supervisor desires
- 3-14. Which of the following is a typical skill level of an ET just reporting aboard a ship from a "C" school?
1. Knows the fundamental theory and has the skills required to perform any maintenance on electronic equipment
  2. Knows the advanced theory and has the skills required to perform the minimum maintenance on electronic equipment
  3. Knows the advanced theory and has the skills required to perform any maintenance on digital data equipment
  4. Knows the fundamental theory and has the skills required to perform the minimum maintenance on electronic equipment
- 3-15. Which of the following methods of training can be used to train newly reported ET personnel?
1. On-the-job training (OJT)
  2. Personnel Qualification Standards (PQS)
  3. Formal shipboard training
  4. All of the above
- 3-16. Which of the following procedures should be carried out by a shop supervisor to maintain a successful PQS program?
1. Effectively monitor individual qualification progress
  2. Establish realistic individual qualification goals and time limits
  3. Establish a program to prepare work group supervisors as PQS qualifiers
  4. All of the above

- 3-17. Which of the following factors is most important in the planning of a formal shipboard training program?
1. The adequacy of spaces available for a classroom
  2. A time slot for the class that is convenient for the instructor
  3. The availability of training aids
  4. The availability of a SITE system
- 3-18. Lesson plans that are deemed inadequate by the instructor can be used until new lesson plans can be developed.
1. True
  2. False
- 3-19. If the instructor is not familiar with the subject material, he can usually fake his way through the lesson.
1. True
  2. False
- 3-20. Formal class presentations should be scheduled as early in the day as possible because people will be rested and in a more receptive mood than later in the day.
1. True
  2. False
- 3-21. ETl Ward always keeps her training sessions short and schedules them over three or four days each week. This is desirable because the technical nature of the material covered can cause her class to lose interest if the classes are too long.
1. True
  2. False
- 3-22. Which of the following is NOT a requirement of a suitable classroom aboard ship?
1. Is it well-lighted
  2. Is it free from outside noise
  3. Is it near a head
  4. Is it comfortable
- 3-23. Which of the following tests is best adapted to measuring a skill that has been taught during a formal classroom presentation?
1. Placement
  2. Aptitude
  3. Written
  4. Performance
- 3-24. To prevent negating the effort that you put into preparing for a training session, you should avoid which of the following pitfalls?
1. Developing any distracting mannerisms
  2. Talking during a loud burst of background noise
  3. Talking down to a class
  4. All of the above
- 3-25. Which of the following actions will usually help make a class presentation more interesting?
1. Talking in a monotone voice
  2. Jangling coins in your pockets
  3. Tossing in a comment on a personal experience
  4. Explaining each point at least twice
- 3-26. Which of the following publications discusses the quarterly forecast, weekly schedules, and various personnel and group training records that must be kept?
1. OPNAVINST 3120.32
  2. NAVPERS 18068
  3. NAVEDTRA 10500
  4. NAVEDTRA 10061

- 3-27. When you are trying to locate training films, which of the following entities can be a good source for listings of available training films?
1. Support activities
  2. Audiovisual centers
  3. Your activity's ESO
  4. All of the above
- 3-28. Which of the following is the best justification for having a record of training?
1. It provides continuity to the training program by indicating what training is to be scheduled
  2. It provides continuity to the training program by indicating what training has been accomplished
  3. It provides careful attention to the training program by indicating what training is to be scheduled
  4. It is required by your division officer
- 3-29. Which of the following are governing elements to be used to determine the ship's schedule for training?
1. Operating schedule and availability of training aids
  2. Assigned overhauls or availabilities and operations schedule
  3. Holiday leave periods and assigned overhauls
  4. Availability of instructors, and holiday leave periods
- 3-30. Which of the following publications contains information of major importance needed to ensure that overall training coordination and planning are effective?
1. The operating schedule
  2. The training cycle
  3. The long-range training plan
  4. The PQS
- 3-31. To develop the weekly training, you should first look at which of the following documents?
1. The operating schedule
  2. The availability schedule
  3. The EDVR
  4. The long-range training plan
- 3-32. What information is provided by the training officer's quarterly forecast of all-hands evolutions?
1. Estimate of the number of normal working hours required to carry out evolutions involving participation by all hands
  2. Number of hours that are available to accomplish individual division activities
  3. Estimate of number of normal work hours required for individual training
  4. Both 1 and 2 above
- 3-33. How many hours per person make up the normal work week used as a basis for the quarterly forecast of all-hands evolutions?
1. 30 hours: 6 hours per day for 5 days
  2. 35 hours: 7 hours per day for 5 days
  3. 40 hours: 8 hours per day for 5 days
  4. 49 hours: 7 hours per day for 7 days
- 3-34. During a certain week when your ship is in training for deployment, your training officer has reserved 10 crew-hours for training. How many hours will be available for division activities?
1. 20
  2. 25
  3. 30
  4. 39



- 3-35. The Division Quarterly Forecast of Activity will show how the time available for division activities during the quarter is to be divided among which of the following requirements?
1. Training
  2. Watch standing and training
  3. Lessons and routine operations only
  4. Watch standing, lessons and drills, and routine operations
- 3-36. The use of the Division Quarterly Forecast is mandatory for all divisions, regardless of ship type.
1. True
  2. False
- 3-37. The use of the Division Quarterly Forecast is most helpful in the control of large groups of personnel participating in diversified activities.
1. True
  2. False
- 3-38. Which of the following is a good rule of thumb to use in determining time allotments for the Division Quarterly Forecast?
1. 70% for maintenance; 30% for training
  2. 30% for maintenance; 70% for training
  3. 60% for training; 40% for maintenance
  4. 50% for training; 50% for maintenance
- 3-39. The preparation of the quarterly training schedule requires which of the following characteristics or actions to accomplish individual and team training?
1. Common sense
  2. Extensive planning and record keeping
  3. Careful planning and imagination
- 3-40. Who is/are responsible for maintaining the division's quarterly training?
1. Department head
  2. EMO/division officer
  3. Leading petty officer
  4. Work center/group supervisors
- 3-41. A definite training schedule is needed to ensure that each of the ship's ET drills and exercises is taught at least how often?
1. Annually
  2. Once per deployment
  3. Quarterly
  4. Monthly
- 3-42. To prepare the weekly training schedule, the training petty officers should consult which of the following documents?
1. The EDVR
  2. The quarterly training schedule
  3. The quarterly forecast
  4. The division forecast of activity
- 3-43. Which of the following items for training should be used to make up the weekly training schedule?
1. Training items previously scheduled that were not accomplished
  2. Training items scheduled by the quarterly training schedule
  3. Pertinent information listed on the long-range training schedule
  4. All of the above
- 3-44. Who is responsible for approving the weekly training schedule?
1. Leading petty officer
  2. Division officer/EMO
  3. Training officer
  4. Department head

3-45. Which of the following categories of training, if any, should be used for making up the weekly schedule?

1. Military, all-hands, and professional
2. Industrial, military, and all-hands
3. Safety, leadership, and all-hands
4. None of the above

3-46. Which of the following categories of training applies to training for personnel in a specific rating group?

1. All-hands
2. Military
3. Professional
4. Industrial

3-47. Which of the following categories of training applies to the "know your ship" type of training information, regardless of rate or rating?

1. All-hands
2. Military
3. Professional
4. Industrial

3-48. Which of the following general record forms is used to maintain records of training?

1. Type I
2. Type II
3. Type III
4. Type IV

3-49. Which of the following general record forms is used for scheduling instructional periods, and has spaces for each day of the year on the reverse side of the form?

1. Type I
2. Type II
3. Type III
4. Type IV

3-50. Which of the following general record forms is useful in preparing the long-range training schedule and the quarterly and divisional forecasts?

1. Type I
2. Type II
3. Type III
4. Type IV

QUESTIONS 3-51 THROUGH 3-58 PERTAIN TO CHAPTER 6.

3-51. Alternate SQCIs do not need to have the same degree of qualifications and will not be given the same responsibilities as normally assigned SQCIs.

1. True
2. False

3-52. Which of the following terms is defined as a management function that attempts to eliminate defective products?

1. Quality assurance
2. Quality control
3. Audit
4. Controlled material

3-53. SUBSAFE requirements are split into how many categories?

1. Five
2. Two
3. Three
4. Four

3-54. The QA manual for each TYCOM sets forth which of the following requirements?

1. Maximum QA requirements
2. Specific QA requirements for ships
3. Specific QA requirements for shore activities
4. Minimum QA requirements

- 3-55. The instructions contained in the QA manual apply to what organizations?
1. Shore activities only
  2. Combat ships only
  3. Every ship and activity of the force
  4. Repair ships only
- 3-56. What term is defined as a certain level of confidence required in the reliability of repairs made?
1. Level of assurance
  2. Level of control
  3. Level of essentiality
  4. Level of reliability
- 3-57. Which of the following programs provides maintenance personnel with information and guidance necessary to administer a uniform policy of maintenance and repair?
1. 3-M
  2. QA
  3. IEM
  4. COSAL

- 3-58. Which of the following is one of the main goals of the QA program?
1. To ensure every repair of any field equipment is documented
  2. To decrease the time between equipment failures
  3. To ensure the safety of personnel while they work on SUBSAFE items only
  4. To protect personnel from hazardous conditions

## ASSIGNMENT 4

Textbook Assignment: "Quality Assurance," chapter 6, pages 6-1 through 6-14; and "Test Equipment," pages 7-1 through 7-2.

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QUESTIONS 4-1 THROUGH 4-52 PERTAIN TO CHAPTER 6.

- 4-1. What QA form is used by a CMPO to document proper receipt and inspection of controlled material items?
1. QA Form 1
  2. QA Form 2
  3. QA Form 3
  4. QA Form 4
- 4-2. Which of the following personnel is responsible for initiating a departure from specifications report?
1. The work center supervisor
  2. The quality control inspector
  3. The person causing or finding the departure
  4. The quality assurance officer
- 4-3. Which of the following terms is defined as a written instruction designed to produce acceptable and reliable products, whether produced or repaired?
1. Inspection
  2. Process
  3. Procedure
  4. SUBSAFE
- 4-4. What should an SQCI know about workers in addition to what they are required to do?
1. How they go about it
  2. What tests to administer for recertification
  3. How they should stow all controlled material
  4. What audits are required of them
- 4-5. What level of assurance provides for "as necessary" verification techniques?
1. Level A
  2. Level B
  3. Level C
  4. Level I
- 4-6. Besides a good personnel orientation program, which of the following additional elements are required for an effective QA program?
1. A comprehensive training program, use of proper repair procedures, and a uniform liberty policy
  2. A comprehensive training program, use of proper repair procedures, and uniform inspection procedures
  3. A comprehensive training program, use of new tools and equipment, and uniform inspection procedures
  4. Use of new tools and equipment. and a proper working environment
- 4-7. What are the two types of departures from specifications?
1. Major and minor
  2. Major and semiminor
  3. Minor and semiminor
  4. Semiminor and minimal
- 4-8. Under which of the following maintenance circumstances must technical specifications be met?
1. On SUBSAFE work
  2. On level I work only
  3. Only when controlled material is used
  4. At all times

- 4-9. Who is responsible for maintaining the ship's QA records and test and inspection reports?
1. TYCOM
  2. CO
  3. RO
  4. QAO
- 4-10. What type of departure from specification must be approved by the appropriate authority?
1. Major departure from specification only
  2. Minor departure from specification only
  3. Any departure from specification
- 4-11. Who is responsible to the force commander for QA in the maintenance and repair of the ship?
1. TYCOM
  2. CO
  3. QAO
  4. QCI
- 4-12. Which of the following statements pertains to your situation when you are assigned as an SQCI for your command?
1. When assigned as an SQCI, you will personally inspect each item that is repaired or manufactured in your space
  2. Your assignment as an SQCI will be a primary duty
  3. You will be responsible for the proper stowage of controlled material
  4. As an SQCI, you must ensure to the utmost of your knowledge and ability that the performance and products meet the required specifications and that the installations are correct
- 4-13. What QA function is performed to identify production standards or material characteristics during manufacture or repair cycle that may not be detectable during final inspection?
1. Quality assurance
  2. Quality control
  3. In-process inspection
  4. Technical repair standards
- 4-14. If, during the repair process, you must change the original scope of the work to be performed, what procedure must you initiate?
1. Revision
  2. Addendum
  3. Automated work request
  4. Controlled work package
- 4-15. Which of the following individuals attaches QA Form 3 to material found to be unsatisfactory?
1. The individual finding the unacceptable condition
  2. The work center supervisor
  3. The quality control inspector
  4. The quality assurance officer
- 4-16. The basic thrust of the QA program is to ensure that you comply with technical specifications during all work done on ships of both the surface and submarine forces. There are two main elements of the QA program. The first is administrative. What is the second?
1. Judicial
  2. Technical
  3. Job execution
  4. supply
- 4-17. Which of the following levels of assurance, if any, normally requires both quality control and test or inspection methods?
1. A
  2. B
  3. C
  4. None of the above

- 4-18. Which of the following problems may cause a worker to fail to report a departure from specifications?
1. Lack of training
  2. Lack of adequate planning
  3. Lack of adequate inspection
  4. Each of the above
- 4-19. Which of the following is a system that ensures materials, data, supplies, and services conform to technical requirements and repaired equipment performs satisfactorily?
1. Levels of assurance
  2. Quality control
  3. Quality assurance
  4. Levels of control
- 4-20. If you wish to have a greater understanding of the terms used throughout the QA program, you may review either the appropriate TYCOM manual or what other publication?
1. OPNAVINST 4790.4B
  2. MIL-STD-109
  3. NAVSEA OD 45845
  4. OP 43P6A
- 4-21. Who is responsible for recertifying all SQCIs and CMPOs upon expiration of their respective qualifications?
1. TYCOM
  2. CO
  3. QAO
  4. QAS
- 4-22. The person with the most direct concern for quality workmanship within a work center is which of the following personnel?
1. The production supervisor
  2. The shop craftsman
  3. The division officer
  4. The department head
- 4-23. Which of the following is an example of a QA action performed following the completion of a series of tasks?
1. Final inspection
  2. In-process inspection
  3. Receiving inspection
  4. Screening inspection
- 4-24. When assigned as an SQCI, how familiar should you be with aspects of the QA program and the quality control procedures and requirements of your specialty?
1. Partially familiar, as a minimum
  2. Partially familiar with aspects of the QA program and thoroughly familiar with QC procedures and requirements
  3. Thoroughly familiar with all aspects of the QA program and partially familiar with QC
  4. Thoroughly familiar with all aspects of the QA program and QC procedures and requirements
- 4-25. Because the instructions set forth within the QA manual are general in nature, each activity must implement a QA program to meet the intent of the QA manual.
1. True
  2. False
- 4-26. Failure to complete a required retest of a component or subsystem that, if defective, could cause flooding would require submission of what type of departure from specifications?
1. Critical departure from specifications
  2. Minor departure from specifications
  3. Major departure from specifications
  4. Semi-minor departure from specifications

- 4-27. To what kind of work do QA requirements apply?
1. Work done by IMAs only
  2. Work done by ship's force only
  3. Work done by IMAs as well as work done by ship's force
  4. Work done by an overhaul facility
- 4-28. There are five levels of responsibility for the QA program for the Atlantic fleet surface force: (1) force commander, (2) audits, (3) squadron commanders, (4) IMAs, and (5) what other level?
1. Force ships
  2. TYCOM
  3. Departments
  4. Officers in charge
- 4-29. Which of the following terms is defined as the degrees of control measures required to assure reliability of repairs made to a system, subsystem, or component?
1. In-process inspection
  2. Levels of control
  3. Levels of assurance
  4. Levels of essentiality
- 4-30. Which of the following terms applies to an item that has had its material composition tested and verified?
1. Level I
  2. SUBSAFE
  3. Controlled material
  4. Specification
- 4-31. What procedure(s) should you follow if, during a repair process involving simultaneous performance of procedure steps, the steps are in different locations?
1. Reject the job and send the CWP back to planning
  2. Make a copy of the CWP with its documentation for each job site
  3. Use locally developed practices
  4. Have the CWP at one job site
- 4-32. CMPOS are trained and qualified by the QA supervisor and should be what paygrade(s)?
1. E3/E4
  2. E4 only
  3. E5 only
  4. E4/E5
- 4-33. Which of the following terms is associated with the range of controls representing a high degree of confidence that procurement specifications have been met?
1. In-process inspection
  2. Levels of control
  3. Levels of assurance
  4. Levels of essentiality
- 4-34. A departure from specifications is a lack of compliance with a procedure, an instruction, or which of the following directives?
1. An IG
  2. An NSTM
  3. An order
  4. A plan
- 4-35. What QA term is defined as any technical or administrative directive that defines repair criteria?
1. Procedure
  2. Reliability
  3. Specification
  4. Technical repair standard
- 4-36. Which of the following is NOT a description of controlled material?
1. Has special markings
  2. Has accountability throughout the repair or manufacturing process
  3. Is stowed separately
  4. Must be open purchased

- 4-37. Which of the following information is NOT provided to a supervisor in a CWP?
1. QA form instructions
  2. QC procedures
  3. QC techniques
  4. Stowage location of SUBSAFE material
- 4-38. What area of direct responsibility ensures that all departures from specifications are reported, required audits are conducted, and adequate maintenance is performed for that material condition necessary to support continued unrestricted operations?
1. TYCOM
  2. CO
  3. QAO
  4. QCI
- 4-39. As a work center supervisor, you should teach your workers to strive to achieve first-time quality on every task assigned. This will instill in them pride and professionalism and ensure what else?
1. A quality product
  2. A product that does not need to be QA'd
  3. A lessening of QA paperwork
- 4-40. As a work center or work group supervisor, you will be responsible for which of the following actions concerning QA?
1. Issuing SQCI certification stamps
  2. Training personnel to be SQCIs
  3. Ensuring that all corrective actions performed by shop personnel meet prescribed standard and all corrective actions performed by shop personnel are done correctly
  4. Certifying shop personnel as CMPOs and SQCIs
- 4-41. A well-organized quality assurance and inspection program will minimize the impact of situations such as improper performance of repairs or installations which could endanger an expensive piece of equipment.
1. True
  2. False
- 4-42. When formal training for a specific skill is not a requirement, what publication(s) may you use as a guideline for training personnel to provide them with the necessary expertise to perform a required action?
1. 3-M manual
  2. Military standards
  3. NAVSEA technical documents
  4. QA manual
- 4-43. A properly functioning QA program points out problem areas to maintenance managers so they can take appropriate action to accomplish which of the following actions?
1. Distribute required technical information more effectively
  2. Improve the reliability, uniformity, and quality of the total maintenance effort
  3. Improve the work habits, training, and procedures of maintenance personnel
  4. All of the above
- 4-44. Ultimate responsibility to ensure that a repair is done according to technical specifications rests with the person performing the maintenance action. To do the job properly, a supervisor must ensure which of the following conditions about the worker?
1. That he or she is adequately supervised
  2. That he or she is properly trained
  3. That he or she is provided with correct tools and parts
  4. All of the above



4-45. Which of the following terms is defined as marking the specific portion of a SUBSAFE system within which the stringent material or operability requirements of SUBSAFE apply?

1. SUBSAFE system
2. SUBSAFE material
3. SUBSAFE boundry
4. SUBSAFE barrier

4-46. What level of responsibility provides instruction, policy, and overall direction for implementation and operation of the force QA program?

1. Commanders in chief of the fleet
2. TYCOM
3. CO
4. QAO

4-47. What QA form is used by a CMPO to record controlled material that is received and issued?

1. QA Form 2
2. QA Form 3
3. QA Form 7
4. QA Form 9

4-48. Which of the following terms is defined as a set of actions written in a special sequential order by which a maintenance action, a test, or an inspection is done using specific guidelines, tools, and equipment?

1. Documentation
2. In-process inspection
3. Process
4. Procedure

4-49. What term is defined as all of the action required to return an equipment to its proper operating condition after a defect has been discovered?

1. SUBSAFE
2. Repair procedures
3. Quality control
4. Quality assurance

4-50. What level of assurance provides for the most stringent or restrictive verification techniques?

1. H
2. B
3. C
4. I

4-51. An SQCI is responsible for which of the following actions?

1. Conducting QA audits
2. Coordinating the ship's QA training program
3. Inspecting all work for conformance to specifications
4. Stowing controlled material separately from noncontrolled items

4-52. The achievement of an effective QA program depends on which of the following factors?

1. Speed of repair, special skills, and knowledge
2. Speed of repair, special skills, and prevention of defects
3. Knowledge, prevention of defects, and speed of repairs
4. Knowledge, prevention of defects, and special skills

QUESTIONS 4-53 THROUGH 4-59 PERTAIN TO CHAPTER 7.

4-53. Who is responsible for all electrical and electronic TAMS, other than avionics, assigned to the command?

1. Operations Officer
2. EMO/ERO
3. TEPO
4. Combat Systems Officer

4-54. What are the two categories of test equipment?

1. SPETERL/COSAL
2. Operational/Non-operational
3. Basic/Advanced
4. GPETE/SPETE

- 4-55. Items listed in MIL-STD-1364 are SPETE.
1. True
  2. False
- 4-56. The allowance of test equipment for a ship is contained in which of the following publications?
1. SPETERL
  2. MIL-STD-1364
  3. MEASURE Format 310
  4. Electronics Installation and Maintenance Books
- 4-57. To manage the test equipment program on your ship properly, which of the following requirements must you meet?
1. Have a thorough understanding of Navy test equipment programs
  2. Have a working knowledge of the administration and references pertaining to test equipment
  3. Have a knowledgeable and cohesive organization that involves all TAMS users
  4. All of the above
- 4-58. The TEPO has (a) what title and (b) what responsibility?
1. (a) Test equipment program officer  
(b) Is the focal point for your ship's TAMS
  2. (a) Test equipment program officer  
(b) Has overall responsibility for all TAMS
  3. (a) Test equipment petty officer  
(b) Is the focal point for all matters related to TAMS
  4. (a) Test equipment; petty officer  
(b) Has overall direct responsibility for all TAMS
- 4-59. As a senior technician, you are expected to be able to manage a test equipment program. Which of the following areas is/are involved in the administration of a test equipment program?
1. The stowage and handling of test equipment
  2. The calibration and repair of test equipment
  3. The inventory, procurement, and disposal of test equipment
  4. All of the above

## ASSIGNMENT 5

Textbook Assignment: "Test Equipment," pages 7-2 through 7-11; and "Maintenance/COSAL," chapter 8, pages 8-3 through 8-5, and 8-7 through 8-8. You will also need to refer to *Life Cycle Management of Portable Test Equipment, Measuring and Diagnostic Equipment (TMDE)* and *Ships' Maintenance and Material Management (3-M) Manual* (chapter 7 references), and *Procedures for Conducting a Shipboard Electromagnetic Interference (EMI) Survey (Surface Ships)* (chapter 8 references).

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QUESTIONS 5-1 THROUGH 5-26 PERTAIN TO CHAPTER 7.

5-1. Any device that is functionally separate from, but permanently connected to, the prime equipment or system, and is used for the express purpose of testing that prime equipment or system is known as what type of test equipment?

1. Automatic test equipment
2. Mechanical test instrument
3. Test, measuring and diagnostic equipment
4. Built-in test equipment

5-2. Equipment designed to test an equipment or system for performance degradation and to perform fault isolation of unit malfunctions with a minimum of human intervention is known as what type of equipment?

1. Automatic test equipment
2. Mechanical test instrument
3. Test, measuring and diagnostic equipment
4. Built-in test equipment

5-3. Any device that is used to measure, calibrate, gauge, test, inspect, diagnose, or otherwise examine materials, supplies, and equipment to determine compliance with requirements established in technical documents is known as what type of test equipment?

1. Automatic test equipment
2. Mechanical test instrument
3. Test, measuring and diagnostic equipment
4. Built-in test equipment

5-4. Which of the following documents identifies the latest known requirements for test equipment for your ship?

1. SCLISIS
2. SPETERL
3. PEETE
4. MEASURE Format 310

5-5. At which of the following intervals will a ship normally receive its updated SPETERL?

1. Annually
2. At the start of an overhaul
3. Before an availability where major electronic change-outs will occur
4. Both 2 and 3 above

- 5-6. Which of the following is a good reason for keeping careful inventory and distribution records of test equipment?
1. To maintain effective use
  2. To allow proper maintenance of test equipment
  3. To enable monitoring of calibration status of test equipment
  4. Each of the above
- 5-7. Refer to figure 7-2 in the TRAMAN. What information (10-digit number) is provided in the fifth column from the left of the sample SPETERL?
1. The manufacturer's number of the test equipment
  2. The test equipment number
  3. The allowance equipage list number
  4. The application number
- 5-8. Which of the following is a good use for the reverse side of the NAVSUP Form 306?
1. To record test equipment calibration status
  2. To record test equipment maintenance
  3. To document sight inventories
- 5-9. Refer to figure 7-4 in the TRAMAN. What is the basic purpose of using an inventory record such as the one shown in the figure?
1. To maintain the location of a specific item of test equipment by the test equipment type
  2. To maintain an inventory of onboard test equipments of a specific SCAT code, and identification, custody, and issue information about each piece of equipment
  3. To maintain an inventory of each item of test equipment and custody signatures for each item issued
- 5-10. In what order should the "test equipment status inventory" cards be filed (other than by category)?
1. By SCAT code
  2. By Work center/group
  3. By test equipment model number
  4. By group or type of test equipment
- 5-11. Which of the following is the best description of the "SCAT" code?
1. A 4-digit, numeric, selected category code that identifies a range of test equipment type
  2. A 4-digit, numeric, subcategory code that identifies a range of measurements by functional category
  3. A 5-digit, numeric, subcategory code that identifies a range of measurements by functional category
  4. A 5-digit, numeric, selected category test equipment code that identifies a range of test equipment
- 5-12. The PEETE Index can be used to supersede or modify the SPETERL and as a basis for authorized procurement and requisition of items listed in the SPETERL.
1. True
  2. False
- 5-13. From which of the following terms is the acronym "SCAT" derived?
1. SelectCategory and Applicable Test equipment code
  2. Support Category Applicable Test equipment code
  3. Subcategory codes
  4. Support Category codes
- IN ANSWERING QUESTIONS 5-14 AND 5-15, REFER TO FIGURE 7-6 IN THE TRAMAN.

- 5-14. What section of the PEETE Index should you use to find out what equipments use a particular SCAT code?
1. Section I
  2. Section II
  3. Section III
  4. Section V
- 5-15. What section should you use to locate the models of test equipment that may satisfy a particular SCAT code?
1. Section II
  2. Section IV
  3. Section V
  4. Section VI
- 5-16. Refer to figure 7-7 in the TRAMAN. What appendix should you use to determine a stock number from a known SCAT code?
1. Appendix A
  2. Appendix B
  3. Appendix C
  4. Appendix D
- 5-17. In addition to ship support requirements, the quantity of each SCAT also depends on which of the following factors?
1. The location of prime equipments and systems, and the number of these prime equipments and systems installed
  2. The frequency of test equipment usage, and the ability to share test equipment among different divisions
  3. The portability of the test equipment, and the number of personnel that use the test equipment
  4. All of the above
- 5-18. At which of the following times should the SPETERL be "bumped" against the COSAL?
1. Annually
  2. Semiannually
  3. Only at the completion of overhaul
  4. Before a major deployment
- 5-19. To report a PEETE configuration change, you should use which of the following forms?
1. OPNAV 4790/2K
  2. OPNAV 4790/2L
  3. OPNAV 4790/2P
  4. OPNAV 4790/CK
- 5-20. Refer to figure 7-9 in the TRAMAN. After bumping the SPETERL and COSAL against one another, you find that a particular piece of test equipment required for PMS is on board and is listed in the SPETERL, but is not listed in the COSAL. What is the possible cause?
1. A deficiency in allowance
  2. A change in quantity was not reported
  3. Configuration changes were not reported
  4. PMS requirements were not reported to NAVSEALOGSUPENGACT
- 5-21. When using OPNAV Form 4790/CK to report a turn-in or receipt of PEETE, you do not need to check the configuration file correction block at the top of the form.
1. True
  2. False
- 5-22. To determine what GPETE excesses and deficiencies exist on board, you should look at what GPETE is on board. Which of the following sources/references should you use to determine the GPETE allowance?
1. Current SCLISIS
  2. Current SPETERL
  3. Approved ACRs
  4. Both 2 and 3 above

5-23. For GPETE management purposes, the term "on board" means that the item has been sighted, and the term "physically accountable" means that the test equipment is actually on board or can be traced to a calibration or repair facility currently having temporary custody of the item.

1. True
2. False

5-24. Which of the following statements describes what you should do to correct a GPETE deficiency caused by obsolete equipment?

1. Submit an ACR and a 1348 supply request for a replacement for the obsolete equipment
2. Submit a report of survey (DD Form 200) for the obsolete GPETE and requisition for a replacement
3. Turn in the obsolete GPETE to supply; this will automatically generate a requirement/requisition for a replacement
4. Wait for the equipment to arrive, as you would for a "new or increased allowance"

5-25. The Navy Metrology and Calibration (METCAL) Program was instituted to help provide calibration facilities so sophisticated equipment, precise standards, and laboratory conditions would be available.

1. True
2. False

5-26. For a GPETE deficiency, if the cog is 7Z and if the item is a replacement for another item of GPETE that is or once was on board, what procedure should you follow to procure the replacement item?

1. Select the preferred model of test equipment which has the same SCAT code, then requisition the item by submitting a 1348 supply requisition for the item
2. Notify the applicable SYSCOM by message or speedletter, requesting a replacement
3. Submit an ACR to replace the item with a newer or better GPETE within the same SCAT code
4. Submit a report of survey and turn in the GPETE for which the replacement is required; this will generate a replacement/requisition

QUESTIONS 5-27 THROUGH 5-56 PERTAIN TO CHAPTER 8.

5-27. What type(s) of disturbances are referred to as electromagnetic interference?

1. Electrostatic disturbances only
2. Electromagnetic disturbances only
3. Both 1 and 2 above

5-28. Which of the following methods should you use to reduce or eliminate EMI on equipment that has been installed for some time?

1. Conduct an extensive EMI survey
2. Use everyday, common-sense approaches to maintaining the equipment
3. Contact a NAVELEX activity for immediate assistance in finding ways to control EMI
4. Both 2 and 3 above

- 5-29. Which of the following is a list of the primary types (sources) of electromagnetic interference?
1. Radio-frequency and natural only
  2. Radio-frequency, natural, and man-made
  3. Natural, inherent, and man-made
  4. Inherent, motor, and man-made
- 5-30. What type (source) of EMI includes noise within a piece of electronic equipment, caused by thermal agitation of electrons following through circuit resistance?
1. Natural interference
  2. Inherent interference
  3. Radio-frequency interference
  4. Man-made EMI
- 5-31. What type (source) of EMI can be severe, degrading the operation of shipboard or shore-based data processing equipment?
1. Natural interference
  2. Inherent interference
  3. Radio-frequency interference
  4. Man-made EMI
- 5-32. What type of EMI is caused by events such as snow storms, electrical storms, rain, and solar radiation?
1. Natural
  2. Inherent
  3. Radio-frequency
  4. Man-made
- 5-33. What type of EMI is normally noticed as background noise in a radio receiver tuned to a frequency between stations?
1. Natural
  2. Inherent
  3. Radio-frequency
  4. Man-made
- 5-54. What type of EMI is commonly called static or atmospheric noise?
1. Natural
  2. Inherent
  3. Radio-frequency
  4. Man-made
- 5-35. What type of EMI is produced by a number of different classes of electrical and electronic equipment, such as transmitters, welders, and electrical controllers?
1. Natural
  2. Inherent
  3. Radio-frequency
  4. Man-made
- 5-36. What type of interference can cause problems with rf communications and data links, but does not cause many problems with modern digital data equipment?
1. Natural
  2. Inherent
  3. Man-made
- 5-37. What are the two types of frequency spectrum interference?
1. Wideband and narrowband
  2. Broadband and shortband
  3. Broadband and narrowband
  4. Highband and lowband
- 5-38. What type of spectrum interference consists of a single frequency or a low range of interference frequencies, and has a minor effect on communications or electronic equipment?
1. Broadband
  2. Narrowband
  3. Wideband
  4. Shorthand

- 5-39. What type of spectrum interference occupies a relatively large part of the electromagnetic spectrum?
1. Broadband
  2. Narrowband
  3. Wideband
  4. Shorthand
- 5-40. What type of spectrum interference is usually caused by arcing or corona, and causes most EMI problems in digital equipment?
1. Broadband
  2. Narrowband
  3. Wideband
  4. Shorthand
- 5-41. Arcing or corona is generated in which of the following ways?
1. By worn or improperly installed brushes of motors or generators and arcing of contacts in electrical controllers or stepping switches
  2. By ignition systems of motor vehicles and igniters for jet engines
  3. By defective fluorescent lights and defective power lines or power transformers
  4. Each of the above
- 5-42. Improperly bonded lifelines, rigging, and stanchions produce a significant amount of EMI by acting as nonlinear mixing devices and antennas, receiving a number of different transmitted frequencies, mixing them, and reradiating them over a broad spectrum.
1. True
  2. False
- 5-43. What type of EMI is basically blocked out by a ship's steel hull and construction?
1. Narrowband
  2. Broadband
  3. Natural
  4. Man-made
- 5-44. Which of the following factors must be considered for shipboard installation of computer and digital equipment?
1. Equipment location and source of power
  2. Equipment shielding and system/equipment grounds
  3. Interconnecting cables
  4. All of the above
- 5-45. As you finish working on an equipment, which of the following procedures concerning EMI should you follow before you return the equipment to use?
1. Ensure that all cover plates are installed and fastened correctly, and ensure that all drawers are secured correctly
  2. Check all EMI-reducing contacts and/or wire gaskets for their condition. Replace them as necessary
  3. Both 1 and 2 above
  4. Ensure that all power being supplied to the equipment is filtered
- 5-46. Which of the following statements concerning interconnecting cables used in shipboard electronic and digital systems is NOT correct?
1. All interconnecting cables should be shielded cables
  2. Cables for digital equipments and audio should always run parallel to and in the same cableways as other cables, such as cables carrying rf signals and high-power-pulse cables
  3. The shield and connector shell should be electrically connected and properly secured at both ends
  4. Shielding protects the data and voice cables from EMI to a great extent



- 5-47. Unusual random EMI problems in equipment can sometimes be caused by a defective line filter or unusually large voltages on power lines.
1. True
  2. False
- 5-48. Control of EMI at a shore-based installation requires which of the following factors to be considered in addition to those that apply to shipboard installation?
1. Shore power
  2. Site location
  3. Soil Quality
  4. Both 2 and 3 above
- 5-49. Which of the following precautions for EMI, if any, may be required at shore-based equipment sites near industrial facilities?
1. Shielding may be needed around especially sensitive pieces of equipment
  2. Additional line filters and regulators for power lines may be needed to reduce EMI and provide line power within specifications
  3. Both 1 and 2 above
  4. None
- 5-50. Which of the following statements is correct concerning soil quality at shore-based equipment sites?
1. Soil with a good conduction will cause EMI problems because the soil will act as an antenna
  2. A system-ground bus is usually attached to a grounding rod driven into the soil
  3. Soil that is dry, sandy, and rocky is preferable to other types of soil because grounding problems are minimal
- 5-51. EMI surveys are conducted to distinguish which equipment is affected by EMI and to determine the extent of the interference. In which of the following situations should an EMI survey be required or requested?
1. When a ship is newly constructed
  2. When a ship receives an overhaul or major repair work that changes its electro-magnetic configuration
  3. When EMI is affecting the ship's equipments and ship's force and assistance personnel cannot locate the source
  4. All of the above
- 5-52. Detailed information on EMI surveys and reports may be found in which of the following publications/instructions?
1. OPNAVINST 5310.19
  2. OPNAVINST 4790.4
  3. MIL-STD-1605
  4. SPCCINST 4441.170
- 5-53. When an EMI test plan is prepared, which of the following information should be provided?
1. The number of items of equipment
  2. The positions to be monitored
  3. The approximate time the survey should take
  4. All of the above
- 5-54. Which phase of an EMI survey test phases consists of operating certain active electronic equipment while receivers and susceptible equipment are monitored for EMI?
1. Phase I
  2. Phase II
  3. Phase III
  4. Phase IV

5-55. Which phase of an EMI survey test phases consists of measuring electromagnetic emissions from certain installed equipment to determine whether these emissions are potential sources of interference to the ship's electronic systems?

1. Phase I
2. Phase II
3. Phase III
4. Phase IV

5-56. After an EMI survey has been completed a report is made, stating the cause and severity of the interference and other pertinent information. Which of the following information is also provided in the report?

1. The effects on ship's scheduling, and the personnel responsible for any additional work or material required
2. The methods recommended for reducing or eliminating the interference, and the estimated manpower and materials required to accomplish the recommended changes
3. Both 1 and 2 above
4. The equipments to be condemned from operation and the use of the equipment affected by the EMI

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NAME \_\_\_\_\_ ADDRESS \_\_\_\_\_  
Last First Middle Street/Ship/Unit/Division, etc.

RANK/RATE \_\_\_\_\_ SOC. SEC. NO. \_\_\_\_\_ City or FPO \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_  
DESIGNATOR \_\_\_\_\_ ASSIGNMENT NO. \_\_\_\_\_

☐ USN ☐ USNR ☐ ACTIVE ☐ INACTIVE OTHER (Specify) \_\_\_\_\_ DATE MAILED \_\_\_\_\_

SCORE

1	2	3	4		1	2	3	4		1	2	3	4				
T	F				T	F				T	F						
1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	26	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	51	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	27	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	52	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	28	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	53	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	29	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	54	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	30	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	55	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	31	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	56	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	32	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	57	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	33	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	58	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	34	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	59	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
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11	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	36	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	61	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
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24	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	49	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	74	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
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